

**AMENDMENT UNDER 37 C.F.R. § 1.116**  
**U. S. Application No. 09/116,589**

**REMARKS**

Claims 28, 29 and 64 are all the claims pending in the application.

By the present Amendment, Applicant seeks to amend claims 28 and 29 and add new claims 65 and 66.

In response to the Amendment filed March 11, 2004, the Examiner maintained all of the previous claim objections and rejections. The current status of the claims is the following.

As a preliminary matter, the Examiner objects to the March 11 Amendment under 35 U.S.C. § 132 as allegedly introducing new matter into the disclosure, due to the addition to claims 28 and 29 of the limitation of the first and second interference fringes being assigned to first and second parts of the pixels, respectively.

Claims 28, 29, and 64 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement, because of the “assigned to a first part of the pixels” and “assigned to a second part of the pixels” recitations.

Claims 28, 29, and 64 are objected to because the claims allegedly fail to provide structural and logical relationships among the various terms recited in the claims.

Claims 28 and 64 are rejected under 35 U.S.C. § 103(a) as being unpatentable over previously-cited Wreede et al. (US 5,499,118) in view of previously-cited Dausmann et al. (US 5,825,514) and previously-cited Moss et al. (US 5,016,953).

Claim 29 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Wreede et al. in view of previously-cited Hopwood (US 4,915,464), Dausmann et al., and Moss et al.

With regard to the claim objections, Applicant has the following comments. The Examiner asserts that it is not clear how the “hologram-recorded medium,” the “collection of

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pixels,” and the “plurality of volume type diffraction gratings comprising volume holograms” relate to the “photosensitive material” and the “interference fringes” of claims 28 and 29. In an exemplary embodiment of the invention, a hologram-recorded medium 101 (FIG. 19) comprising a collection of pixels 102 is fabricated from a photosensitive material 107 (FIGS. 18 (a) - (c)), by striking illumination light 108 on a first reflection type hologram 106 so that first interference fringes 103 (FIG. 19) are recorded in the photosensitive material 107. The first reflection type hologram 106 is replaced by a second reflection type hologram 106’, struck by illumination light 108 to form second interference fringes 103. As shown in FIG. 19, there are different types of interference fringes 103, based on which reflection type hologram 106 was used to make the interference fringes. In other words, the preambles of claims 28 and 29 describe the fabricated hologram-recorded medium, while the limitations of the claims describe the elements used in the fabricating process. For example, the photosensitive material 107 is the material which becomes the hologram-recorded medium 101 by performing the claimed method. Similarly, the diffraction gratings recited in the preamble of claims 28 and 29 correspond to the interference fringes formed in the photosensitive material. In light of the foregoing explanation, Applicant submits that the objection to the claims, based on the structural and logical relationships, is hereby overcome.

With regard to the claim rejections and objections based on the recitation of “assigned to a first part of the pixels” and “assigned to a second part of the pixels,” Applicant amends claims 28 and 29 to remove these recitations from the claims. Removing these recitations will remove the source of new matter objection, the basis for the § 112, first paragraph, rejection and the remaining claim objection.

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Turning to the prior art rejections, Applicant has the following comments.

By the present amendment, Applicant amends claim 28 to recite stacking a photosensitive material, capable of recording a volume hologram, on a dichroic filter comprising a multilayer interference film, said dichroic filter being stacked on a first reflection type relief hologram. Applicant submits that the prior art fails to teach or suggest these features of the claim.

Similarly, claim 29 is amended herein to recite stacking a photosensitive material, capable of recording a volume hologram, on a dichroic filter comprising a multilayer interference film, said dichroic filter being stacked on a first transmission type hologram. Applicant submits that the prior art fails to teach or suggest these features of claim 29.

Therefore, claim 28, its dependent claim 64, and claim 29 are allowable over the prior art.

Claims 65 and 66 are added to further define the present invention. These claims are allowable, at least because of their dependence from claims 28 and 29, respectively.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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